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| **Lesson Plans for Area-Perimeter Exploration** | | | |
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| **GLETS** | Describe how changing the measure of one attribute of a geometric figure affects other measurements. |  |
| **Content Objective** | I will calculate areas of given geometric figures, then change all dimensions by a given scale factor, and calculate the area of the new figure. Then I will then write a statements summarizing the relationships between areas and perimeters when dimensions are changed. |  |
| **Assessment** | Students will demonstrate by performing computations on similar trapezoids of different sizes to determine if area and perimeter relationships are the same as for rectangles and triangles. |  |
| **Summary of Content Addressed** | The goal is for students to recognize and use the fact that as a polygon grows (or shrinks) in size the perimeter will change as a direct variation with the scale factor while the area will change in size with the square of the scale factor.  Although students have not been taught the concept of proportionality of similar figures it does address standard 5.1 as stated in the pacing guide. |  |
| **Key Vocabulary and Lit Terms** | **Scale factor** |  |
| **Warm-Up** | **Students will copy a sketch of trapezoid and calculate area and perimeter.** |  |
| **“I Do”** | Pose the essential question How do the perimeter and area change as the dimensions of a polygon is changed by a scale factor.  Emphasize that ALL dimensions are being multiplied by the same factor.  Demonstrate the process through stage one of the exploration (rectangle). |  |
| **“We Do”** | Guide students as they repeat the process using the triangles (stage 2).  At this point stage 3 trapezoids can be used as a check for understanding. |  |
| **“You Do”** | Practice exercises. |  |
| **Resources** |  |  |